

AN ESSAY
ON
THE USE OF NITRIC ACID,
AS AN ESCHAROTIC,
IN
CERTAIN FORMS
OF
HEMORRHOIDAL AFFECTIONS;
ILLUSTRATED BY CASES.

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AN ESSAY,

&c. &c.

CAUSTIC applications, as a means of cure in hemorrhoidal diseases, were formerly much in use ; but, latterly, they have been not only discontinued, but even denounced by the Profession, without any reservation or exception whatsoever. Boyer says regarding them : “ Aussi a-t-on renoncé entièrement à leur usage.” It may therefore appear a rash act to attempt their revival in any form. Nevertheless, a confidence in the efficacy of one of the class, namely, *nitric acid*, in certain forms of the disease which it is the object of this communication to explain, encourages me in venturing thus to give it a public recommendation ; and I do so, not merely on the strength of my own experience, but on that also of several other gentlemen, who, having given it a trial, have found in it a remedy at once efficient, safe, and easy of application. The name of my distinguished friend, Mr. Cusack, I am in particular desirous of mentioning in connexion with this subject, because the employment of the nitric acid in such cases has not only the high sanction of his approval, but to him, in an especial manner, is due the first suggestion of its use as a remedy.

Without waiting to attempt to reconcile the diversities of opinion which pervade medical writings on the subject of the pathology of hemorrhoids, I shall proceed to explain, briefly, my own views on this point, so far as I consider a statement of them necessary towards the illustration of the subject of my memoir.

The form in which hemorrhoids most commonly exist, is that of a simple varicose state of the veins; and it would be well if to all such, the names "varices" or "varicose tumours of the rectum" were applied, and restricted. In this sense I shall use these terms. Affections of this nature, in their simple uncomplicated condition, are very common. Few persons, in fact, when they have passed middle age, are altogether free from them. They appear often under particular circumstances, and disappear again when the causes which called them forth, such as pregnancy, constipation, &c. have passed away; and, under such circumstances, the epithet of disease is no more applicable to them than it is to the saphena veins of the limbs, when rendered varicose from similar causes. A proneness to congestion and dilatation in the rectal veins, is laid in the reticulated arrangement of their branches about the anus, and the disadvantageous position of their trunks in reference to the *portal* circulation; but, to meet this, the vessels are endowed with a power of reaction which soon restores them to their original state, if not seriously altered in texture by too great or too long-continued over-distention.

Varices of this nature present themselves at the mucous surface, or under the skin in the neighbourhood of the anus; or they may appear in both these situations at the same time. When turgid with blood, they form violet-coloured tumours, elastic, little painful, disappearing on pressure, but re-appearing as soon as the pressure has been removed. In many instances, these outward dilatations constitute only a moiety of those which surround the rectum, the inferior part of the bowel being frequently imbedded in a mesh of dilated and turgid veins, the presence of which must render the knife, or even the needle and ligature, implements of danger in such cases, whenever they happen to become objects of surgical treatment.

But it is seldom for these varices, in their simple state, that remedies are sought. It is usually for some of the consequences that spring out of them, or some of the complications which at-

tend them, that the medical attendant is consulted ;—a circumstance which should never be lost sight of in forming a prognosis as to the amount of relief which may be given, or in determining the extent to which treatment is to be pushed to obtain that relief.

The state of the parts to which the term *external hemorrhoid* is applied, is one of these conditions. The affections bearing this name are at first merely off-sets from the dilated veins, admitting, during their early periods, of the ready ingress and egress of blood from these latter vessels ; and sometimes continuing so to admit it for a long period. Such are found under several forms. Sometimes, and that even where no complaint has ever been made of them, they are visible in considerable numbers around the anus, as shut sacs, inclosing small clots of blood ; and, as marking their original source, still lined with a fine serous membrane analogous to that forming the inner coats of the veins : these are, evidently, the remains of external piles, which have undergone spontaneous obliteration. At other times, especially when seated in the line of junction between the skin and mucous membrane, the affection assumes the form of permanent tumours, of greater or less magnitude, and of complex cellulated texture. Such tumours (*marischi*) by forming adhesions to the mucous membrane or skin, and bursting there, under circumstances of congestion, and also by their becoming occasionally the seat of acute inflammation, produce all the inconveniences which characterize a “ fit of the piles.” They, too, in the course of these changes, may undergo a spontaneous cure, leaving behind them only small fleshy, innocuous tumours ; but as long as they continue to swell and bleed, they may be regarded as still remaining in communication with the deeper varices from which they originally sprung. Operations on such tumours, by cutting instruments, are, on this account, usually attended with considerable, sometimes profuse, hemorrhage ; but, nevertheless, such operations may be regarded as safe and justifiable, inasmuch as, that any bleeding which arises

may be readily checked by the ligature, styptics, or actual can-
tery. Accordingly, excision, or destruction with the red-hot iron,
are unhesitatingly resorted to, whenever the inconveniences at-
tendant on such affections require a radical removal for their
cure.

Respecting the term *internal hemorrhoid*, it is more vague
in its application ; and the pathology of the state of parts which
it is meant to indicate, is much less generally understood. I be-
lieve that the simple varix, or even that more complicated state
in which it exists as an external hemorrhoid, is not the condi-
tion which most usually produces distress or annoyance, in what
are called “inward piles.” The amount of suffering is never
proportioned to the bulk of such simple varices. We see indi-
viduals in whom the veins are so large and prominent, as to ap-
pear calculated, mechanically, to produce great intestinal de-
rangement, yet in whom, except in so far as occasional bleeding
incommodes them, there is not much distress ; whilst in others,
a hemorrhoidal tumour, not bigger than a marble, deranges the
entire economy of the body. The state of the mucous membrane
covering such varices would appear to influence the condition of
the case, more than that of the varix itself. While the mucous
membrane continues smooth, and pale, and free from morbid
sensibility, there will be little distress ; and the tumours will swell
and subside, and even pour out blood occasionally, without the
patient being at all aware of the extent of organic derangement
which he labours under : but as soon as a relaxed state of the
membrane,—a state to which it will soon be brought by the ir-
ritation and dragging to which it is subjected by the pressure of
the fæces against the tumour of the varix, and the efforts of strain-
ing to overcome constipation,—as soon as this state of the mem-
brane is induced, then, the varix coming down under the sphinc-
ter, is strangled, made to bleed, and to inflame. Or, when from
similar causes, ulceration of the mucous membrane over the va-
rix is established, then, distress of another, and even a worse
description, viz., tenesmus, muco-purulent discharges, strainings

at stool, and hemorrhages of dangerous amount are entailed upon the sufferer. Or, still farther, when that state of the mucous membrane, to which the term "vascular tumour" is applied, supervenes, as I believe it often does, upon a varix, then, a simple and otherwise innocuous affection becomes one productive of most poignant suffering.

Of this latter complication,—the *vascular tumour*,—as that to which, in particular, I consider the application of the nitric acid beneficial, I propose to speak somewhat in detail.

The multiplicity of names given to this disease, such as "vascular tumour," "hæmorrhoidal excrescence," "erectile tumour," "spongy hæmorrhoid," "varicose tumour," "internal hæmorrhoid," &c., leads the mind astray, and prevents it from forming any accurate conception respecting its true nature. I am disposed to regard it as an affection of the mucous membrane and sub-mucous tissue, exclusively, and to treat it as such. It may, and I believe it usually has, for its basis, a nuckle or bunch of varicose veins; but it may also be a distinct and independent growth, the result of some other irritation in this region. I have seen it covering the surface of one varix in a rectum, while others in the same bowel have been smooth, and free from any such growth,—the former being the source of much annoyance, the latter giving no trouble at all. (*See Cases III. IV.*) I have also seen the affection, in young individuals particularly, where the veins were quite free from any varicose dilatation, but in whom, after a time, varices formed as the result of the irritation of the vascular tumour. And I have observed that, in almost all cases of inward piles of long standing, no matter whether the affection have begun originally as a varix, or as a degeneration of the mucous membrane, both affections come to be present in conjunction, reciprocally aggravating each other's severity. (*See Cases I., II., III.*)

These tumours vary in size in different patients, from a pea to a walnut. Their number, also, is equally variable. Sometimes there is but one; in other instances, there may be two or more; and in others, again, they are so numerous and large as to cause, by

their protrusion through the anus, a permanently widened state of that aperture, and a habitual prolapse, not only of the tumour itself, but also of a portion of the bowel. In the early periods of the affection, the tumours are so soft, compressible, and free from pain as scarcely to be discoverable by the finger when introduced into the rectum, and scarcely, therefore, to be deserving of the term, tumour; but, when of long standing, and especially when they have been permitted to remain down for protracted periods at the water-closet, they acquire an increase of firmness and a tenderness which render them easily detected by such manipulations, and give them a tangible and permanent character. The dragging and pressure to which they are subjected in being pushed out and squeezed by the sphincter in defecation, renders them likewise prominent, and gives to them often a pedunculated or polypus-like form. The surface of the tumour is either granulated like a strawberry, or of a villous aspect. It is of a red colour, and, when protruded from the anus, bleeds from every pore as from a sponge. It is easy to satisfy one's-self on this latter head, by drying the surface of the tumour, when a fresh issue of blood instantly takes place from every point of its surface. The blood discharged, in such cases, is always of the arterial red colour,—a circumstance which often, in itself, indicates the true nature of the affection, and enables us to distinguish it from rupture of a varix. But, nevertheless, although this may be true as regards the direct issue of blood from the part, yet this very fluid, may, if allowed to lie in the cavity of the rectum before being discharged per anum, acquire a dark red, and even a grumous character. (*See Case I.*) The bleeding in the former is also of more frequent occurrence, appearing with every effort at defecation, and weakening the patient more by the frequency and persistency of the drain than by the quantity lost at stated periodical intervals, such as usually takes place in the bursting of varices from over-distention.

Regarding the pathology of “vascular tumours,” there are, I believe, two varieties of organic lesion, which, although dif-

fering somewhat as to their origin and nature, produce nevertheless equal inconvenience, and admit of cure by the same means. One of these is that to which the term "erectile" has been applied, from the supposed resemblance of the disease to congenital affections of this class; the other,—a congested, hypertrophied, and tender state of the membrane, the result of irritative, or inflammatory action.

The first is regarded by many as a sort of aneurism by anastomosis of the small vessels of the mucous membrane and sub-mucous tissue exclusively, and may be independent from the first of varices of the general veins about the anus. Mr. Colles, who had an opportunity of examining the structure of one of those tumours in a person who died of another disease, says, "on slitting up the rectum, I saw three blood-vessels, each as large as a crow-quill, running for some way down the intestine and then dividing into a number of branches; these vessels ramified very profusely, and each seemed by interweaving of its branches to form one of these tumours. The trunks and branches were covered only by the lining membrane of the intestine. This examination shows us how inapplicable to this disease are the terms 'varicose tumors,' 'hemorrhoidal excrescences.'" This affection may occur in youth, and has been seen high up in the intestinal canal; but its most frequent seat is the lower part of the rectum. There is not originally or necessarily any pain arising out of it; but, by long exposure in the rectum to many sources of irritation, and by enlargement and prolapse from the anus, it runs into a state of actual disease, of which Cases I. and II. may serve as examples. It differs from ordinary nævi in not being necessarily congenital, but resembles them too much in its persistent tendency to increase in growth. They are, both, affections which equally require operations for their removal.

The second variety of the vascular tumour is of a chronic inflammatory nature, and may be best described by comparing it to the red, villous, tender, hemorrhagic surface exhibited by

the mucous membrane of the eyelids in old cases of chronic conjunctivis. With the latter, too, the resemblance is still farther established by its habit of secreting pus independently of ulceration. I consider Cases III. and IV. to be examples of this form of the affection. Such tumours are apt to form on old internal varices, which, by their projecting into the cavity of the bowel, expose the membrane covering them to more than ordinary pressure and irritation, and thereby become the direct cause of this morbid development. Once established in connexion with the surface of a varix, the two making between them a compound disease, the distressing qualities of such an affection are not slow in exhibiting themselves. Thus, in case No. III., in which there were several internal projecting varices, that only, on which this hypertrophied condition of the mucous membrane existed, gave annoyance, and on the removal of that and that singly, all hemorrhoidal distress subsided. The "master pile" being removed, the others fell back into a state of painless quiescence. As in the foregoing variety, there is no relief for this affection but in destruction of the morbid growth. They both, therefore, differ from the diseased conditions which supervene on external varices, in having no disposition or power to undergo a spontaneous cure; and, consequently, are more likely, at some period of their course, to become objects of surgical interference.

If such be a correct view of the pathology of certain internal hemorrhoids, and I have no doubt that in very many cases it will be found so, then, I would ask, are such severe remedies as those usually employed, viz., the knife or ligature, either necessary or safe? If the seat of the baneful part of the affection lie on the surface, why not rather adopt such means as may remove that surface, *per se*, without extending beyond it, rather than such as may, on the one hand, by going to an unnecessary depth, wound vessels of such magnitude as are capable, when opened, of pouring out blood to the hazard of life; or, on the other, by

the severity of its operation, engender the most painful and the most dangerous symptoms? It is not for me to rehearse all the disadvantages which attend on these modes of treatment; suffice it to say, that no man ever applies either the knife or scissors, or even the needle and ligature, in any such patients, without more or less of misgiving as to the success, or apprehension as to the result of the experiment. It is enough to read the objections to any one of these operations, as detailed by the advocates of the other, and *vice versâ*, to be satisfied of the little confidence reposed by the profession in either.

The properties of *pure nitric acid*, as an escharotic, point it out, in theory, as an agent fitted to take the place of these over-severe remedies, in cases where a superficial destruction of the part to be removed is all that is required; and the application of it to practice has fully proved its efficiency as a substitute. This acid, at the density of 1500, destroys, on the instant, the vitality of the part to which it is applied, by the production of a chemical decomposition of its solid and fluid elements. The depth of the slough which is to follow may be regulated, in some degree, by the quantity of acid laid on the part; and its extent, laterally, may be confined with sufficient exactitude to the limit of its first application, by instantly smearing the whole over with olive oil, which neutralizes its farther corrosive powers, by combining and forming with it a new, but no longer corrosive, compound. The beneficial effects of nitric acid, in arresting phagedenic and other unhealthy inflammations, and substituting in their stead one of a salutary character, recommend it as a remedy little likely, in itself, to do any serious mischief, if applied with the necessary precautions—a guarantee which certainly cannot be extended to other escharotics of equal power. The separation of the slough, after the application of nitric acid, leaves a healthy suppurating surface, which contracts and heals over very quickly.

The nitric acid, then, in its operation on the vascular tumour, combines in itself all the advantages possessed by excision or

ligature, without any of their disadvantages. The tender, tumid, and bleeding surface is removed with little pain and without danger; and, in the cicatrization which rapidly follows, a radical cure is effected. But the good effects do not stop here; not only is a reparation of the worst part of the affection accomplished, but, by the bracing up of the general mucous membrane which follows the removal of the relaxed and diseased part of its surface, other varices which may be present are supported and reduced in bulk, and ulcers, or even fissures, are healed: and these secondary good results may be regarded as not the least important which have taken place on the occasion. The resumption of the natural action of the bowels, and the general improvement in health which follows the application of the acid to a single vascular hemorrhoid, even where several are left behind (see Cases III. and IV.), show an improvement in the state of the rectum generally, greater than could be supposed to arise from the simple abstraction of one from among the number. The contraction of the mucous membrane following the removal of a portion of its extent, acts beneficially on the bowel, in the way, perhaps, that the contraction which follows the removal of it in the operation for prolapsus ani, acts; or in the way in which the removal of a piece of the scrotum, as recommended by Sir A. Cooper, operates in relieving varicocele; or, to use a still more familiar illustration, in that in which a laced stocking operates in remedying a varicose state of the veins of the lower extremities, viz., by bracing and giving support to the relaxed subjacent veins and other textures. The relief, too, which the bowel gains by the removal of such a source of local irritation, contributes, no doubt, in a prominent degree, to the production of the same good results.

The application of the acid may be made in the following manner. Let the patient strain as at the night-chair, so as to bring the tumours fully into view; and, while they are so down, let him either lean over the back of a chair, or lie down in the bent posture on the side on which the disease exists, with

the buttocks over the edge of the bed.* Let a piece of wood, cut into the shape of a dressing-case spatula, be dipped in the acid, and then, with as much of the acid adhering to it as it will carry without dripping, let it be rubbed on the tumour to the extent desired. The due effect of the acid on the part is shown by its changing it to a greyish-white colour. If a superficial slough be all that is required, a single application may be enough; if a more deep one, then, two or three applications of the wood dipped in the acid may be made in quick succession; which being finished, let the part be well smeared over with olive oil, provided beforehand for the purpose. The prolapsed parts should then be pushed back within the sphincter, the patient put to bed, and an opiate administered. The pain of the application is sharp and burning at first, but goes off in two or three hours, and does not again return in the same form. A general uneasiness about the anus, on motion, together with a slight sense of heat, fulness, and throbbing, are felt for a few days; and there may be some little feverishness; but I have not seen or heard of any more serious effects from the remedy. In Case II., a slight stranguary, which was experienced for a short time, disappeared under the mist. camphoræ c. opio. The symptoms following the application of the acid are usually so mild as not absolutely to require confinement to bed more than a few hours; although, for many reasons, such confinement may often be desirable. On the third or fourth day, a purgative draught should be administered, when the bowels will be found to yield to the medicine, generally without either pain or prolapse of the rectum. The progress after this to healing is rapid, and free from any disagreeable symptoms.

* I may here observe, in passing, that any introduction of the finger into the rectum immediately before the operation should be avoided, as the pressure made thereby on the tumours will so reduce their bulk, that they will not for some time come down again sufficiently for the purpose desired. I mention this, because I have seen both patient and surgeon disappointed, by being obliged from this cause to defer the operation to another day.

CASE I.—*Vascular Tumour of the Rectum.*

Ellen Connor, æt. 26, a servant ; admitted into the City of Dublin Hospital, April 27th, 1840. States, that about five years ago, after much exposure to wet and cold, she became subject to bleedings from the rectum, often repeated, but unattended with pain or prolapse of any kind. At the expiration of five or six months, and not earlier in the course of her ailment, she discovered two small tumours at the anus, coming down when at the night-chair, but returning immediately after, of themselves. At the expiration of another year the tumours had increased in bulk, although still retaining their softness ; but they now, instead of receding of themselves, required to be pushed back with the hand. There was now, also, greater frequency and urgency in the call to stool, and superadded to the blood, there was a discharge of slimy mucus and pus from the rectum. The bowels have been throughout constipated, unless relieved by medicine. The bleeding has continued more or less ever since the first, only diminishing occasionally after purgation, to recur in a few weeks, as before. Besides these comparatively moderate bleedings, a more copious hemorrhage has taken place about every three months, with tolerable regularity. Notwithstanding this continued draining of blood, the catamenia have all along remained natural, both as to quantity and periodicity. In the beginning of the past year she got married, but has not become pregnant ; and, while experiencing no amendment in her old complaint, has become affected with a leucorrheal discharge.

State on Admission. — Her countenance is completely exsanguis ; more so, she says than usual, in consequence of the heavy losses of blood she has sustained within the last few days, and which have been, in particular, the cause of her present application for relief, fearing that she might die suddenly, as she has had several fits of fainting. But, although thus blanched in colour, she is not as reduced in flesh as might be expected, considering the length of standing of her complaint, and the inces-

sant drain upon her store of blood from such repeated hemorrhages. Neither are her limbs or other parts the seat of any dropsical effusions ; but she exhibits the ill effects of such losses, in the presence of muscular debility, headaches, palpitations of the heart, and a small dicrotous pulse. The anus, as viewed externally, appears quite natural, and free from hemorrhoidal disease ; but, on causing the patient to bear down, three flat tumours, about the size of gooseberries, are protruded from the rectum, pushing open, and filling up the orifice, two at one side, and one at the other. These tumours, as they first come out, are of a bright scarlet colour, soft and painless, but, when allowed to remain down for a few moments, they change to a dark red, and become tense and painful, and blood oozes from every part of their surface. These tumours admit easily of being pushed back into the rectum, the anus having undergone a certain amount of widening by their continued presence in that aperture ; but when followed by the finger, they are scarcely to be felt, having subsided on being freed from the strangulation of the sphincter. There are neither ulcers, nor fissures of any kind about the anus or rectum, from whence the extravasated blood, or muco-purulent discharges could flow, nor from whence the painful feelings in defecation could emanate. The case I judge to be one of "vascular tumour" of the rectum.

The bowels being much confined, and filled with flatus, the following draught was administered.

R. Aq. Cinnam. ζ i. : Ol. Ric. ζ vi. : Sp. Tereb. ζ ii. M.

April 28th. Bowels well freed ; the blood passed from the rectum, by the operation of the medicine, amounted to several ounces ; and although that seen on the preceding day, as issuing from the vessels of the tumour, was distinctly arterial, yet, that now exhibited, as having lain in the bowel for some time before being evacuated at the night chair, was venous, and mixed with dark coagula ; pulse 94, weak, and tremulous ; she is agitated

and desponding, and so filled with the idea that she cannot live, as almost to refuse consent to the adoption of any decided means for her relief.

Habeat enema anodynum horâ somni.

29th. Slept well; little hæmorrhage; pulse 86, and stronger; more cheerful, and resigned to treatment.

30th. The patient having forced down the tumours, and being laid on her side in bed, the pure nitric acid was rubbed on the right tumour in the manner above directed (see page 103). The cauterized part was instantly smeared over with oil, and then replaced within the sphincter. The application of the acid caused severe pain.

℞. Aceti Opii, gtts. xv. : Aq. Cinnam. ʒi. M.—Statim.

May 1st. Some feeling of heat, fulness and pain in the rectum, but no outward swelling; slept badly; pulse 90; headache; clean tongue.

Ordered to remain in bed; fomentations; an opiate at bed-time.

2nd. Hemorrhage trifling; local uneasiness abated; slept soundly; pulse 86.

Ordered, a mutton chop, and a glass of wine.

3rd. No bleeding since yesterday; slept well; feels much better, and more cheerful; pulse 80. The tumour to which the acid was applied does not now protrude, although the others exhibit themselves, tense, red, and hemorrhagic as before.

Habeat haustum purgantem.

4th. Together with the fæces, a considerable quantity of blood was passed by stool this morning; no other change in the local symptoms.

R. Aquæ ʒ viii.; Sulph. Quiniæ g. xvi.; Acid. Sulph. dil. ʒi. M.

St. cochl. duo amplâ ter in die.

Mutton and wine to be continued.

10th. All local uneasiness from the effects of the acid has subsided, but there are occasional hemorrhages from the un-cau-

terized tumours; general health greatly improved; walks out of doors.

The same aperient draught as before was ordered, with a view to an application of the acid to the remaining tumours.

12th. The acid was this morning freely rubbed to the full extent of the red, vascular, bleeding excrescences, and the parts then oiled and replaced, as on the former occasion.

Ordered, Aceti Opii gtts. xv. statim.

13th. Suffered pain yesterday for a couple of hours, but it then went off, and she slept; to day she is quite easy; pulse 80; tongue clean; appetite so good, that she wishes for her chop, which is allowed.

16th. For the last three days the amendment has been progressive. There is now neither prolapse of the tumour nor pain during the expulsion of the fæces, and the hemorrhage has altogether ceased. The introduction of the finger can be tolerated, but it causes pain. A little pus stains the finger from the points touched by the acid.

26th. Protrusion of the tumours does not follow any, the most strenuous efforts, of straining; all bleeding has ceased; and all pain and uneasiness have subsided. The patient bears the introduction of the finger without making any complaint, except when the point is pressed to either side, where a small depression, marking the seat of the former tumours, still remains tender to the touch; but, although tender, these spots do not give out purulent matter in any appreciable quantity, and may, therefore, be regarded as healed.

30th. Discharged; completely cured of all the inconvenience and distress attendant on the late affection of her rectum; and much improved in looks and general health.

CASE II.—*Vascular Tumour complicated with Varices.*

Mrs. ———, a lady, æt. 52, consulted me in October, 1840, for an affection of the rectum, of many years' standing.

She had always menstruated regularly, and had been married at the age of 40 ; but had never borne children.

At first she suffered under her infirmity without complaint, regarding it as “ only” piles ; but, latterly, she has been almost entirely confined to her house, and sometimes even to her couch. She complains of a partial falling down of the rectum on every exertion of the body, accompanied often with an escape of some of its contents, such as *fæces* or muco-purulent discharges. Whenever the bowels are allowed to be confined, she suffers pain and hemorrhage ; and, when relaxed, she is distressed by prolapse, tenesmus, and an irresistible inclination to sit long at the water-closet, from which she is only relieved by lying down and pressing up the tumour within the sphincter. Her health shows all the ill effects arising from oft-repeated losses of blood, local irritation, and distress of mind.

On an examination of the anus in the horizontal posture, no outward appearance of disease presented itself ; but as soon as the patient stood up, and made a slight effort of coughing, two tumours, one from each side, protruded from within—soft, red, and perfectly distinct from each other. They admitted of being returned with the same readiness as they had descended, on account of an unusually patulous state of the anal opening, induced by their oft-repeated presence in that passage. The tumours, when fully out, looked as if they formed a complete ring around the opening, like a simple prolapse of the mucous membrane ; but, during their return, were observed to separate, so as to constitute two distinct points of disease. On being followed by the finger, the great bulk of the tumours was found to have fallen away, and only a flat, soft elevation, occupied the place of each. The disease, in fact, appeared as a tumour, only when protruded. The subsidence of the congestion in the vessels, which followed their liberation from the sphincter, became the cause of the disappearance of the tumefaction. The general hemorrhoidal veins were varicose, but not to any serious or inconvenient amount. This

latter affection I considered as second, both in origin and in importance to the vascular tumour of the mucous membrane.

As this lady was cognizant of an operation which I had performed on her husband, at a former period, for fistula in ano, she could never (even although a cure had followed in that instance) have been prevailed upon to submit, in her own person, to any remedy more severe than an ointment or a wash; but to any treatment of this latter description she had no objection—regardless of pain, provided that a knife or needles had no concern in the production of it. I determined then on an experiment with the nitric acid; and as I could not be certain of the effect of it on such a patient, or in so confirmed a disease, I thought it best to confine the application of it to one tumour first, and then to be guided by the result, as to whether or not I should use it on the other.

19th. I applied the acid to the left tumour. The usual deadening of the part touched was the immediate result. The protrusion was smeared with oil, and pushed above the sphincter. Twenty drops of the acetum opii was administered on the instant, and a second draught of twelve drops were directed to be given at night, if necessary.

20th. Suffered severe pain, for a short time, after the application; but towards evening got relief, and passed the night in ease, without having had occasion for the second opiate.

21st. Complains of a feeling of fulness in the rectum, and a frequency in the call to urinate. The mucous membrane at the margin of the anus is œdematous, and pain is felt on pressure at the left side of the perineum; but there is very little feverishness, and the patient is perfectly easy when at rest.

Ordered—Camphor mixture. Fomentations. Poultice.

22nd. Stranguary quite gone. Œdema continues, but tenderness relieved. No prolapse. A reddish sero-purulent fluid stains the poultice. Pulse natural; tongue white. Rested well last night.

23rd. Bowels opened by an oil draught. A free evacuation,

with very little pain. No prolapse at left side ; but right came down as usual.

Beyond the pain of the first application, this lady suffered nothing to cause her to refuse assent to the same treatment for the second tumour. And, accordingly, on the 25th, the acid was applied in the same manner as before ; and with results so similar, except as regards the stranguary, which did not this time ensue, that a daily detail of them appears unnecessary. The protrusion did not again recur. The bowels acted under medicine, with little pain or tenesmus. Some sero-sanguineous discharge escaped at the night-chair and on the dressings, for better than a fortnight ; but the anal opening became more contracted and rigid, and the finger could trace the gradual closure of the spaces formed by the acid, until in about a month they ceased to be distinguishable. The mucous membrane, too, inside, which had hitherto felt relaxed and folded, became now, in consequence of the contraction and cicatrization of the inward lesions, more braced and uniform to the feel.

The patient having been thus freed from the affection of the rectum, improved rapidly in general health ; and, for five months after, during which I had occasionally an opportunity of seeing her, had suffered no relapse of the disease.

CASE III.—*Farices, with Vascular Tumour of the Rectum.*

M. Creagh, a sergeant in the Constabulary, æt. 34, and in good general health, was admitted into the City of Dublin Hospital, December 1st, 1842, at the recommendation of James Kerin, Esq. For the last ten years of his life, he has been subject to an occasional discharge of blood per anum, showing itself sometimes on his linen, sometimes when at the night-chair ; but, at first, otherwise unattended with any inconvenience or detriment to his general health or occupations.

About four years ago, he noticed the occurrence of a soft protrusion at the anus when at stool, but which, as admitting easily of return, and as not being accompanied with any new in-

convenience, save an occasional feeling of itching and fulness at the anus, with a tendency to constipation of the bowels, he disregarded. But, in the course of the succeeding years, the protrusion became frequent and painful, and attended with a discharge of pus and mucus as well as blood; and, within the last year, especially, since his being engaged in some duties requiring much standing, it has become so bad that he must now either submit to an operation for relief—an alternative of which he has a very great horror—or resign his place, together with a prospect of promotion, which is at hand.

State on Admission.—Outside the anus there is no appearance of disease; but, on opening that orifice, distended veins show themselves on both sides in the form of soft, smooth, bluish, slightly elevated projections, each about half an inch in diameter, covered with healthy unbroken mucous membrane, and free from pain, inflammation, or disposition to hemorrhage. On the left side, close above these varices, there is a vascular tumour, broad and prominent, like a strawberry, and painful to the touch. This tumour descends readily by straining, so as to protrude from the anus, and even to bring with it, to a certain extent, the other piles. When thus exposed, it swells, becomes painful, and bleeds at every point of its surface. By walking or standing much, the same kind of protrusion occurs. His linen shows marks of a muco-purulent discharge from the part, although there is no appearance of actual ulceration any where.

The tumour I am disposed to regard as a varix, with a covering of morbidly vascular, hypertrophied, and relaxed mucous membrane, to which latter is due its present enlarged, sensitive, and hemorrhagic condition.

8th. A purgative draught having been administered last night, and the rectum washed out this morning by a lavement of tepid water, the pure nitric acid was applied to the tumour, in the presence of Professors Benson and Williams, and Mr. Kerin, and not only laid on, but rubbed into, its substance, by several applications of the stick which conveyed it; the part

was then smeared with oil, and pushed back again beyond the sphincter. The man got an opiate, and was put to bed.

9th. He suffered severe burning pain for a few hours after the application of the acid, but then fell into a perspiration, and towards evening became quite easy. He slept well last night, and this morning feels no pain in the part, except when it is pressed on. Pulse 80; tongue white; stomach sick, tense, and uneasy from flatus.

℞ Infus. Menthæ. ℥ vii.; Tinct. Zinzeb. ℥ vi.; Aq. Laur. Cer. ℥ iss.

M. fiat Mistura. Sumat cochl. duo ampla tertiis horis.

10th. The only local sensations are a slight degree of heat, fulness, and throbbing; pulse 76; much relieved of the flatulence.

Ordered to get out of bed. Occasional fomentations.

12th. A sense of weight in the rectum, accompanied with a desire to go to the night-chair.

℞ Inf. Sen. C. ℥ i.; Tinct. ejusd. ℥ ii.; Pulv. Jal. gr. xv.; Sulph.

Magnes. ℥ ii. M.

Fiat Haustus, statim sumendus.

13th. Bowels moved several times, with very little pain; no appearance of blood in the evacuations, and no prolapse with them. Some pain on pressure along the right side of the anus, but no deep hardness to be felt. Allowed to leave hospital for a few days.

20th. Returned to show himself. He feels no pain or protrusion of any kind, or desire to sit long at the night-chair, such as he formerly experienced. There is neither sanguineous nor purulent discharge to stain the fæces, the tympanitis is gone, and the bowels are regular. The finger cannot discover any tumour inside, and the only sensation produced by its introduction, is a prickling at a point, the seat of the former disease. There is no deficiency to be felt commensurate with the amount of surface destroyed by the acid. The loose mucous membrane would appear to have contracted over the cavity, so as to have

reduced it to a very small compass before, and even independent of, the actual occurrence of eicatrization ; for, if this small spot be pressed at all roughly, the finger receives from it a stain of blood.

28th. He reports that, yesterday, in order fully to test the value of his cure, by trying it on the grounds on which he had hitherto felt himself most crippled by it, viz. in walking, he exerted his powers in a walk of upwards of seven miles, and had the satisfaction of finding that, neither while engaged in the exercise, nor during the evening after, did he experience uneasiness, prolapse, or discharge of any kind. On examination, per anum, no pain is produced, nor are any traces, either of the tumour or of the cavity formed by its removal, at all appreciable. He looks well ; his bowels act regularly without medicine, which, in itself, is a great improvement on his former state ; and he expresses himself as having been put into the enjoyment of excellent health and spirits.

This man returned, in a few weeks, to his duty ; and I have just heard that he continues (now two months) free from any relapse.

CASE IV.—*Varices with Vascular Tumour of the Rectum.*

Mr. J. D——, æt. 64, robust and healthy looking, consulted me in August, 1841, for an affection of the rectum, to which for several years he has been subject, but which has been gradually becoming more inconvenient and annoying. He states that he is obliged to take aperient medicine every week ; that he cannot walk or go to the water-closet without a descent of a part of the bowel, which then bleeds and is painful ; that latterly, even while sitting, the tumour works its way into the anal opening, and is pained by coming in contact with the chair ; that he feels a continual desire to go to, and remain long at, stool ; that his linen, in spite of his best precautions, is often soiled by the discharges ; and that, altogether, his life is rendered very uncomfortable by it. He says that for a long time his only disor-

ders were a disposition to costiveness and a feeling of fulness about the anus ; and that it is only within the last year and half that such symptoms as prolapse, and pain, and hemorrhage were superadded. He has not observed any thing like periodicity or exacerbations in his ailments, except in so far that he finds himself better when his bowels are soft, and worse when he allows them to become constipated.

On examination, I did not at first observe any outward appearance of disease ; but on making him strain, a single vascular body was pushed out of the anus, sticking as it were, half in and half out, and requiring for its return to be pushed back. Its attachment lay at the right side. The projection which it formed was of the size and nearly the colour of a ripe, red cherry ; and its surface was soft, villous, and exquisitely tender, and gave out arterial blood when touched. The finger, after pushing up the tumour, could feel little trace of it above the sphincter. The veins inside presented several well marked incipient varices.

This affection I consider to be like the foregoing, No. III., only not so far advanced, and less complicated with other varicose derangement.

Having taken the usual precaution of freeing the bowels well, I applied the acid to the projecting tumour, rubbing it only once, gently, to the turgid, vascular surface. The pain, which was burning at first, went off under an opiate, and did not return again. The patient did not find it necessary to remain in bed more than a few hours ; nor did he suffer any distress beyond that, the result of the first application. A purgative, administered on the third night, produced a full evacuation, which passed without giving pain. On making an examination on the fourth morning, the following condition of parts presented :—There was no outward swelling or œdema ; but when the patient strained, the tumour appeared at the anus ; altered, however, greatly in character. It was stripped, as if cleanly dissected to a defined extent, of the vascular membrane which had previously covered it, and now looked smooth, blue, and semi-pellucid like a dilated

vein, with nothing but the delicate coats of the vessel covering the blood. The blood in the vein was evidently stagnant and coagulated ; it felt hard and resisting, and did not admit of being pushed away as it had done before the application of the acid, and while it was circulating and in a fluid state. The acid had produced here two distinct and equally important effects. It had, by its causticity, burned away the sensitive, relaxed, hemorrhagic membrane, and by its irritative qualities had induced a local phlebitis in the subjacent varix, the result of which was a coagulation of the blood in the part of the vessel so circumstanced ; a result in keeping with our knowledge of the effects of phlebitis as a general principle. In some doubt as to what was now best to be done, I applied the acid again to the naked vein and replaced it as before, re-instituting in other respects the same mode of treatment. The pain on this occasion was not so acute as on the former ; and on the third day the parts were so easy and free from tumefaction that I was enabled to make an examination, per anum. The tumour could not now be protruded by straining ; neither could the finger discover any trace of it inside. The spot could only be known by its being pained and by its giving out a little blood and pus, on being touched. In less than a fortnight, every uneasy symptom, both those attendant on the original complaint and those consequent upon the operation, had passed away, and the patient returned with fresh energy to his usual avocations. This gentleman informs me that up to this date (Feb. 1843), he not only has never sustained the slightest return of the hemorrhoidal affection, but that his bowels, which before the operation required medicine continually, have ever since acted, of themselves in the most regular and satisfactory manner. He considers that the removal of the tumour was followed by a complete renovation in the general state of his health.

It is scarcely necessary for me to observe, that, in all these cases, the ordinary palliative modes of treatment had been va-

riously, and at different times, attempted; and that they all were in a state to call for active surgical interference. They were all cases to which, according to the present established rules of practice, ligatures would have been applied, and I will take upon me to say, applied, if not without success in one or two of the patients, at least to be productive of severe and protracted sufferings. One important point in recommendation of the treatment by nitric acid is, its immunity from danger and from pain, or subsequent tedious confinement; for, although in the cases above cited, severe pain and confinement for a few days to bed are spoken of with candour, yet these conditions are not to be taken as the measure of the results to follow in the generality of such cases. The anxiety felt for the success of a new remedy, by increasing my apprehensions regarding it, magnified the sufferings of the patients in my eyes, and impelled me to take precautions for their mitigation beyond, perhaps, their real urgency or necessity, and certainly beyond what I have since experienced in other cases, which, in the confidence of success, I have regarded with more indifference; for, in fact, I have since several times known it to happen, that, after the first feeling of pain, the effect of the caustic, had subsided, the patient has continued to transact his ordinary affairs as usual.

A question of practice may arise, in cases where two or more vascular tumours coexist requiring the application of the acid, as to whether both or all should be touched in the first instance and at the same time? I believe such will, in general, be the proper course for adoption. The severity of the remedy has been shown to be moderate, or such, at least, as not to forbid its application to two points of surface, more than to one; and, besides, the great advantage of completing the operation at once, and of having the time for the accomplishment of the cure thereby materially abridged, will be secured by the adoption of this course. The circumstances of the case must, however, often determine such a matter more than any preconceived rules.

But, let me not be misunderstood as to the cases for which I

recommend the use of nitric acid. I do not speak of it as a remedy for all kinds and degrees of vascular tumours or internal hemorrhoids; nor as one to supersede entirely the knife or ligature. There are cases, no matter how they may have commenced originally, in which, from long standing or other causes, all the textures in the neighbourhood—blood-vessels, skin, mucous membrane, cellular tissue, &c., have become so implicated, that scarcely any one part appears worse than another; and in which some operation, if any, of a more sweeping nature must be had recourse to. For such, the knife or ligature may, according to the choice of the practitioner, be employed. The acid is, according to my experience, adapted especially for cases of more common, every-day occurrence; cases in which the disease, although not involving immediate danger, yet keeps individuals miserable, and interferes with them in the discharge of their ordinary duties of life; cases, in short, which astringents will not cure, and for which, excision or ligature would be unnecessarily severe remedies.

But, in speaking thus cautiously of the extent to which the acid is applicable, I believe that I am recommending it within the range of its power and applicability to the cure of hemorrhoidal diseases. Cases I. and II. may be regarded, perhaps, as among the class of extremes in severity; and the case of a medical gentleman of eminence, cured of long continued and aggravated vascular tumours of the rectum by the nitric acid alone, is well known in this city.

And, farther, I have reason to believe that the beneficial application of this remedy is not confined exclusively to such cases as I have been recommending its use in, viz., vascular tumours. In experimenting with it on these affections I have found that the varices joined with them in some instances, were also removed by the same application.

In Case No. IV., the subjacent varix, which showed itself as such after being stripped by the acid of its tender vascular covering, disappeared under the action of a second touch of the

caustic. And, in a very aggravated case of vascular tumour complicated with large internal varices which my friend Professor Hargrave brought me to see, both one and other were removed by separate applications of the acid. This patient, a respectable married woman, who for years had endured continued prolapses of both tumour and piles, was effectually cured by this treatment; and has since borne children without suffering relapse of the disease. The disappearance of such varices under its use may be brought about in three ways: first, by the direct action of the acid on the whole substance of the tumour, producing a slough thereof to its entire depth; secondly, by the extension of the inflammatory action to the sac of the varix, inciting there a local phlebitis and a consequent coagulation of the blood and obliteration of the venous cavity; and, thirdly, by the destruction of the mucous membrane, simply, without obliteration of the sac—the remedy in this instance being derived from the support which the varix thereafter receives from the cicatrized and tightened membrane. However, as this paper was undertaken solely with the view of recommending the acid for the cure of what are understood by the terms “vascular” or “strawberry-like” tumours of the rectum, I must abstain from entering here upon new ground; reserving such farther observations as I may have to offer on these topics to some more befitting opportunity.

31, *York-street*.

THE END.